



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,458	05/15/2001	Patrick Denis Lincoln	10454-016001	9224

7590 11/07/2002

DAVID L. FEIGENBAUM
Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110-2804

EXAMINER

SMITH, CAROLYN L

ART UNIT	PAPER NUMBER
----------	--------------

1631

DATE MAILED: 11/07/2002

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/855,458

Applicant(s)

LINCOLN ET AL.

Examiner

Carolyn L Smith

Art Unit

1631

-- Th MAILING DATE of this communication appears on the cover sh et with the correspondence address --

P r i d f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disp sition of Claims

- 4) ☒ Claim(s) 1-109 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-109 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Pri rity under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1631

DETAILED ACTION

The art unit designated for this application has changed. Applicant(s) are hereby informed that future correspondence should be directed to Art Unit 1631.

Applicant is hereby notified that the required timing for the correction of drawings has changed. See the last 6 lines on the sheet which is attached titled "Attachment for PTO-948 (Rev. 03/01 or earlier)". It is noted that a PTO Form 948 is mailed herewith. Due to the above notification Applicant is required to submit drawing corrections within the time period set for responding to this Office action. Failure to respond to this requirement may result in abandonment of the instant application or a notice of a failure to fully respond to this Office action.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-76 and 96-109, drawn to a simple inference engine practice, classified in class 703, subclass 11. If this Group is elected then all four of the below summarized specie and subspecie elections are also required.
- II. Claims 77-81, drawn to rule set property determination, classified in class 211, subclass 41.12. If this Group is elected then the first three of the below summarized specie and subspecie elections are also required.
- III. Claims 82-95, drawn to methods of first to second state transition determined by true versus false rule determination. If this Group is elected then the first three of the below summarized specie and subspecie elections are also required.

Specie Election Requirements for Groups I, II, and III:

This application contains claims directed to the following patentably distinct species of the claimed invention:

***First* Specie Requirement For All Groups:**

Specie A: symbols which are polypeptides

Specie B: symbols which are drugs or exogenous agents

Specie C: symbols which are post-translational modifications

If Specie A is elected for Group I, then the following subspecie election also applies:

Subspecie A1: a polypeptide which is a protein kinase

Subspecie A2: a polypeptide which is a protein kinase inhibitor

Subspecie A3: a polypeptide which is a transcription factor

Subspecie A4: a polypeptide which is a cytokine

Subspecie A5: a polypeptide which is a nucleotide binding protein

***Second* Specie Requirement Additionally For All Groups:**

Specie D: a state which is associated with a disease or disorder

Specie E: a state which is not associated with a disease or disorder

***Third* Specie Requirement Additionally For All Groups:**

Specie F: a state which is associated with cell proliferation

Specie G: a state which is associated with cell quiescence

Art Unit: 1631

Specie H: a state which is associated with cell apoptosis

Specie I: a state which is associated with cell differentiation

Fourth Specie Requirement for Group I only:

Specie A: single inference engine practice

Specie B: iterative inference engine practice

Currently, all claims in Groups I, II and III are generic to the species in the first, second, and third specie and subspecie requirements. In addition, all claims in Group I are generic to the species in the fourth specie requirement. This distinctness or independence of a polypeptide versus drugs or exogenous agents versus post-translational modifications (first set of species in Groups I, II and III) as well as protein kinase versus a kinase inhibitor versus a transcription factor versus a cytokine versus a nucleotide binding protein (subspecies of Specie A in first set of species in Groups I, II and III) as well as a disease- or disorder-state versus a non-disease- or non-disorder-state (second set of species in Groups I, II, and III) as well as cell proliferation versus cell quiescence versus cell apoptosis versus cell differentiation (third set of species in Groups I, II, and III) as well as single inference engine practice versus iterative inference practice (fourth set of species in Group I only) is because all of these species are directed to different chemical and/or entity types regarding the critical features therein. For the polypeptide specie, the critical feature is a polypeptide. For the drug or exogenous agent specie, the critical feature is a exogenous agent. For the post-translational modifications specie, the critical feature is a modification. For the kinase subspecie, the critical feature is a kinase. For the kinase

Art Unit: 1631

inhibitor subspecie, the critical feature is an inhibitor. For the transcription factor subspecie, the critical feature is a transcription factor. For the cytokine subspecie, the critical feature is a cytokine. For the nucleotide binding protein subspecie, the critical feature is a nucleotide binding protein. For the disease state specie, the critical feature is a disease. For the non-disease state specie, the critical feature is a non-disease. For the cell proliferation state specie, the critical feature is cell proliferation. For the cell quiescence state specie, the critical feature is cell quiescence. For the cell apoptosis state specie, the critical feature is cell apoptosis. For the cell differentiation state specie, the critical feature is cell differentiation. For the single inference engine practice, the critical feature is one inference. For iterative inference engine practice, the critical feature is multiple inferences. The completely separate chemical and entity types of the invention species and subspecies are often separately characterized and published in literature, thus adding to the search burden if all species were examined together. Thus, the four specie requirements for Group I (all four specie and subspecie requirements) and Group II (first three specie and subspecie requirements), and Group III (first three specie and subspecie requirements) are independent and/or distinct invention types for restriction purposes.

The inventions are distinct, each from the other because of the following reasons:

The inventions of Groupings I, II, and III are independent inventions because they are directed to different entity types regarding the critical limitations therein. For Group I, the critical feature is a simple inference engine practice. For Group II, the critical feature is rule set property determination. For Group III, the critical features are methods of first and second transition using true and false rule determination. The completely separate entity types of the

Art Unit: 1631

invention Groups are often separately characterized and published in literature, thus adding to the search burden if all Groups were examined together. Thus, the three Groupings I, II and III are independent and/or distinct invention types for restriction purposes.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement may be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR §1.6(d)). The CM1 Fax Center number is either (703) 308-4242 or (703) 305-3014.

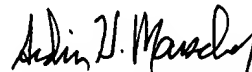
Art Unit: 1631

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carolyn Smith, whose telephone number is (703) 308-6043. The examiner can normally be reached Monday through Friday from 9 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached on (703) 308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to Patent Analyst Tina Plunkett whose telephone number is (703) 305-3524 or to the Technical Center receptionist whose telephone number is (703) 308-0196.

October 28, 2002


ARDIN H. MARSCHEL
PRIMARY EXAMINER